E. Eng.
TN
1
M58

Index of Feature Material
MATERIALS & METHODS

Volume 38, July-December 1953, Inclusive

Material covered in this index includes feature articles, MATERIALS & METHODS Manuals, and Engineering File Facts

Aluminum and Its Alloys

Bend Test for Aluminum-Magnesium Castings, New—Nov, p 186
Connectors for Aluminum Conductors, How to Select—Aug, p 96
Joining Aluminum to Other Metals—Sept, p 96
Ultrasonics — The Answer to Aluminum Soldering?—July, p 59
Vinyl-Metal Sheet, New—Sept, p 94

Annealing Type 414 Stainless Steel Forgings—July, p 78
Ball Bearing Fabricated from Steel Tubing, Simplified—July, p 62
Bend Test for Aluminum-Magnesium Castings, New—Nov, p 186

Brazing (see Welding)

Brinell Hardness Numbers for Various Loads (File Fact)—Dec, p 145
Carbide Precipitation in Welding Stainless Steels, How to Control—Nov, p 98
Carbon and Graphite Parts (File Fact)—Sept, p 137
Carbon Molybdenum Steels (File Fact)—Dec, p 143
Castable Silicone Foam Resins, New—Nov, p 96

Castings and Casting

Bend Test for Aluminum-Magnesium Castings, New—Nov, p 186
Fused Die Castings—Oct, p 119
High Alloy Castings in Heat Treating Equipment—Dec, p 194
Malleable Irons (File Fact)—Nov, p 137
Sand Castings, How Section Size Influences Properties of—July, p 80
Steel Castings, Properties of (File Fact)—Oct, p 153
Vacuum Impregnation Makes Porosity-Free Castings—Sept, p 91

Cementing Metal Screens to Cathode Ray Tubes—Sept, p 184
Ceramic Coating for Jet Engine Parts, Which?—Dec, p 116

Cleaning and Finishing

How to Descale Titanium—Oct, p 107
Metal Cleaning Methods, Selecting (MATERIALS & METHODS Manual)—Nov, p 119
Shot Peening Can be Used to Advantage—Oct, p 110
Surface Contamination and Quality in Titanium Fabrication—July, p 72

Coatings and Finishes

Ceramic Coating for Jet Engine Parts, Which?—Dec, p 116
Furan Resin Impregnants for Plaster—July, p 140
HAE Finish for Magnesium, Properties of—Nov, p 104
Magnesium as a Wear Resistant Metal—Oct, p 120
Protective Coatings for Metals (MATERIALS & METHODS Manual)—Aug, p 109
Silicone-Aluminum Paints for High Temperatures—Sept, p 114
Vacuum Impregnation Makes Porosity-Free Castings—Sept, p 91
Vinyl-Metal Sheet, New—Sept, p 94

Composition and Limited Stress Rupture of High Strength Heat Resisting Alloys (File Fact)—Sept, p 139
Compression Molded Phenolics for Large TV Cabinets—Oct, p 226
Conductivity—A Useful Nondestructive Testing Tool—Oct, p 124
Connectors for Aluminum Conductors, How to Select—Aug, p 96

Copper, Brass and Bronze

Copper and Brass Mill Products Industry, Definitions of Alloys as Used in (File Fact)—Sept, p 141
Copper and Silver Brazing Simplifies Joining of Complicated Assemblies—Dec, p 108

Engineering Coppers (MATERIALS & METHODS Manual)—Dec, p 123
Corrosion Tests for Materials and Finishes, Three Accelerated—Nov, p 110
Die Materials for Limited Production Runs—Nov, p 92
Drawability, New Test for—Aug, p 156
Elastomer-Impregnated Leather, New—Oct, p 127
Elastomers for Low Temperature Service, Specifying—Nov, p 114
Electrical Insulating Materials, Properties of (File Fact)—July, p 107
Engineering Coppers (MATERIALS & METHODS Manual)—Dec, p 123

Engineering File Facts

Brinell Hardness Numbers for Various Loads—Dec, p 145
Carbon and Graphite Parts—Sept, p 137
Carbon Molybdenum Steels—Dec, p 143
Composition and Limited Stress Rupture of High Strength Heat Resisting Alloys—Sept, p 139
Copper and Brass Mill Products Industry, Definitions of Alloys as Used in—Sept, p 141
Electrical Insulating Materials, Properties of—July, p 107
Granular Powders for Powder-Metallurgical Applications—Aug, p 127
Heat Treating Temperatures in Relation to Iron Carbon Diagram—Dec, p 194
Malleable Irons—Nov, p 137
Manganese Steels—July, p 105
Melamine-Formaldehyde Molded Plastics—Nov, p 139
Steel Castings, Properties of—Oct, p 153

Ferritic Steels, New Creep Resistant—Sept, p 87
Fluorocarbon Plastics, Two New Developments in—Dec, p 102

Forgings, Forming

Annealing Type 414 Stainless Steel Forgings—July, p 78
Die Materials for Limited Production Runs—Nov, p 92
Drawability, New Test for—Aug, p 156
Intricate Steel Shapes Now Cold Extruded—Sept, p 101
Surface Contamination and Quality in Titanium Fabrication—July, p 72
Which Metal Form—Spun or Drawn?—Aug, p 87

Furan Resin Impregnants for Plaster—July, p 140
Fused Die Castings—Oct, p 119
Granular Powders for Powder-Metallurgical Applications (File Fact)—Aug, p 127
HAE Finish for Magnesium, Properties of—Nov, p 104

Heat Treatment and Heating

Heat Treating Gears to Meet Rigid Requirements—Aug, p 103
Heat Treating Temperatures in Relation to Iron Carbon Diagram (File Fact)—Dec, p 194
Nitriding Prevents Failures in Critical Steel Parts—Dec, p 96
Surface Hardening of Steels and Irons (MATERIALS & METHODS Manual)—Oct, p 137

High Alloy Castings in Heat Treating Equipment—Dec, p 194

High Temperature Materials

Ferritic Steels, New Creep Resistant—Sept, p 87
High Temperature Materials for Vacuum Service—Dec, p 110
Phenolic-Glass Laminates for Elevated Temperatures—Nov, p 87
Silicone-Aluminum Paints for High Temperatures—Sept, p 114

How to Descale Titanium—Oct, p 107
Intricate Steel Shapes Now Cold Extruded—Sept, p 101

Irons

High Alloy Castings in Heat Treating Equipment—Dec, p 194
Iron Powder Parts, High Strength Precision—July, p 67
Malleable Irons (File Fact)—Nov, p 137
Surface Hardening of Steels and Irons (MATERIALS & METHODS Manual)—Oct, p 137

Joining Aluminum to Other Metals—Sept, p 96

Lead

Die Materials for Limited Production Runs—Nov, p 92

Magnesium

HAE Finish for Magnesium, Properties of—Nov, p 104
Magnesium as a Wear Resistant Metal—Oct, p 120

Malleable Irons (File Fact)—Nov, p 137
Manganese Steels (File Fact)—July, p 105

Manuals, Materials & Methods

Engineering Coppers—Dec, p 123
Metal Cleaning Methods, Selecting—Nov, p 119
Protective Coatings for Metals—Aug, p 109
Rubber Parts—July, p 85
Surface Hardening of Steels and Irons—Oct, p 137
Wood and Wood Base Materials—Sept, p 117

Materials for O-Ring Seals—Dec, p 104
Melamine-Formaldehyde Molded Plastics (File Fact)—Nov, p 139
Metal Cleaning Methods, Selecting (MATERIALS & METHODS Manual)—Nov, p 119
Nitriding Prevents Failures in Critical Steel Parts—Dec, p 96

Nonferrous Metals

Composition and Limited Stress Rupture of High Strength Heat Resisting Alloys (File Fact)—Sept, p 139
High Temperature Materials for Vacuum Service—Dec, p 110
Precision Rolled Thin Strip Has to Offer, What—July, p 82

Nonmetallic Materials (other than plastics)

Carbon and Graphite Parts (File Fact)—Sept, p 137
Ceramic Coating for Jet Engine Parts, Which?—Dec, p 116
Die Materials for Limited Production Runs—Nov, p 92
Elastomer-Impregnated Leather, New—Oct, p 127
Elastomers for Low Temperature Service, Specifying—Nov, p 114
Electrical Insulating Materials, Properties of (File Fact)—July, p 107
High Temperature Materials for Vacuum Service—Dec, p 110
Materials for O-Ring Seals—Dec, p 104
Paper Materials—Properties and Uses—Aug, p 92

(Continued on page 274)

Rubber Parts (MATERIALS & METHODS Manual)—July, p 85
Synthetic Rubber Modifications, What's New In—Sept, p 108
Wood and Wood Base Materials (MATERIALS & METHODS Manual)—Sept, p 117
Paper Materials—Properties and Uses—Aug, p 92
Phenolic-Glass Laminates for Elevated Temperatures, New—Nov, p 87
Photographic Inspection Spots Defective Brazing—Aug, p 94

Plastics

Castable Silicone Foam Resins, New—Nov, p 96
Compression Molded Phenolics for Large TV Cabinets—Oct, p 226
Die Materials for Limited Production Runs—Nov, p 92
Electrical Insulating Materials, Properties of (File Fact)—July, p 107
Flurocarbon Plastics, Two New Developments in—Dec, p 102
Furan Resin Impregnants for Plaster—July, p 140
Materials for O-Ring Seals—Dec, p 104
Melamine-Formaldehyde Molded Plastics (File Fact)—Nov, p 139
Phenolic-Glass Laminates for Elevated Temperatures, New—Nov, p 87
Plastic Moldings, Large—Dec, p 91
Plastics are Used in Air Liners, Where—Aug, p 100
Teflon, How to Tell Quality in—July, p 64
Teflon Joined by Fusion Bonding Method—Oct, p 114
Vinyl-Metal Sheet, New—Sept, p 94
Plastic Moldings, Large—Dec, p 91
Plastics are Used in Air Liners, Where—Aug, p 100

Powder Metallurgy

Granular Powders for Power Metallurgical Applications (File Fact)—Aug, p 127
Iron Powder Parts, High Strength Precision—July, p 67
Precision Rolled Thin Strip Has to Offer, What—July, p 82
Protective Coatings for Metals (MATERIALS & METHODS Manual)—Aug, p 109
Rubber Parts (MATERIALS & METHODS Manual)—July, p 85
Russian Steels Today—Aug, p 79
Sand Castings, How Section Size Influences Properties of—July, p 80
Selecting Materials for Mechanical and Structural Applications—Sept, p 102
Shot Peening Can be Used to Advantage—Oct, p 110
Silicone-Aluminum Paints for High Temperatures—Sept, p 114

Spinning and Spun Shapes

Spun Metal Shapes Meet Tough Requirements—Oct, p 134
Which Metal Form—Spun or Drawn?—Aug, p 87
Stainless Steels, How to Select—Dec, p 98
Stainless Tubing in Radar Screens—Oct, p 116

Steels

Annealing Type 414 Stainless Steel Forgings—July, p 78
Ball Bearing Fabricated from Steel Tubing, Simplified—July, p 62
Carbide Precipitation in Welding Stainless Steels, How to Control—Nov, p 98
Carbon Molybdenum Steels (File Fact)—Dec, p 143
Composition and Limited Stress Rupture of High Strength Heat Resisting Alloys (File Fact)—Sept, p 139
Ferritic Steels, New Creep Resistant—Sept, p 87
High Alloy Castings in Heat Treating Equipment—Dec, p 194
High Temperature Materials for Vacuum Service—Dec, p 110
Manganese Steels (File Fact)—July, p 105
Nitriding Prevents Failures in Critical Steel Parts—Dec, p 96
Precision Rolled Thin Strip Has to Offer, What—July, p 82
Russian Steels Today—Aug, p 79
Stainless Steels, How to Select—Dec, p 98
Stainless Tubing in Radar Screens—Oct, p 116
Steel Castings, Properties of (File Fact)—Oct, p 153
Surface Hardening of Steels and Irons (MATERIALS & METHODS Manual)—Oct, p 137
Vinyl Metal Sheet, New—Sept, p 94
Steel Castings, Properties of (File Fact)—Oct, p 153
Surface Contamination of Quality in Titanium Fabrication—July, p 72
Surface Hardening of Steels and Irons (MATERIALS & METHODS Manual)—Oct, p 137
Synthetic Rubber Modifications, What's New In—Sept, p 108
Teflon, How to Tell Quality in—July, p 64
Teflon Joined by Fusion Bonding Method—Oct, p 114

Testing and Inspection

Bend Test for Aluminum-Magnesium Castings, New—Nov, p 186
Brinell Hardness Numbers for Various Loads (File Fact)—Dec, p 145
Conductivity—A Useful Nondestructive Testing Tool—Oct, p 124
Corrosion Tests for Materials and Finishes, Three Accelerated—Nov, p 110
Drawability, New Test for—Aug, p 156
Photographic Inspection Spots Defective Brazing—Aug, p 94
Teflon, How to Tell Quality in—July, p 64

Titanium

How to Descale Titanium—Oct, p 107
Surface Contamination and Quality in Titanium Fabrication—July, p 72

Tubing

Ball Bearing Fabricated from Steel Tubing, Simplified—July, p 62
Stainless Tubing in Radar Screens—Oct, p 116
Ultrasonics—The Answer to Aluminum Soldering?—July, p 59
Vacuum Impregnation Makes Porosity-Free Castings—Sept, p 91
Vinyl-Metal Sheet, New—Sept, p 94

Welding and Joining

Carbide Precipitation in Welding Stainless Steels, How to Control—Nov, p 98
Cementing Metal Screens to Cathode Ray Tubes—Sept, p 184
Connectors for Aluminum Conductors, How to Select—Aug, p 96
Copper and Silver Brazing Simplifies Joining of Complicated Assemblies—Dec, p 108
Joining Aluminum to Other Metals—Sept, p 96
Photographic Inspection Spots Defective Brazing—Aug, p 94
Teflon Joined by Fusion Bonding Method—Oct, p 114
Which Metal Form—Spun or Drawn?—Aug, p 87
Wood and Wood Base Materials (MATERIALS & METHODS Manual)—Sept, p 117

Zinc

Die Materials for Limited Production Runs—Nov, p 92
Fused Die Castings—Oct, p 119

Authors' Index

Buker, C. B., Drawability, New Test for—Aug, p 156

Campbell, John B.
Metal Cleaning Methods, Selecting (MATERIALS & METHODS Manual)—Nov, p 119
Phenolic-Glass Laminates for Elevated Temperatures, New—Nov, p 87
Plastic Moldings, Large—Dec, p 91
Protective Coatings for Metals (MATERIALS & METHODS Manual)—Aug, p 109

Carlotta, E. L., Materials for O-Ring Seals—Dec, p 104

Chase, Herbert, Fused Die Castings—Oct, p 119

Dupre, Henry, Connectors for Aluminum Conductors, How to Select—Aug, p 96

Durkin, A. E.
How to Descale Titanium—Oct, p 107
Silicone-Aluminum Paints for High Temperatures—Sept, p 114

Edlund, Herbert, Spun Metal Shapes Meet Tough Requirements—Oct, p 134

Everhart, John L.
Die Materials for Limited Production Runs—Nov, p 92
Engineering Coppers (MATERIALS & METHODS Manual)—Dec, p 123
Shot Peening Can be Used to Advantage—Oct, p 110
Surface Hardening of Steels and Irons (MATERIALS & METHODS Manual)—Oct, p 137

Frazier, E. E., Paper Materials—Properties and Uses—Aug, p 92

Gillespie, R. G., HAE Finish for Magnesium, Properties of—Nov, p 104

Henry, H. G., Teflon Joined by Fusion Bonding Method—Oct, p 114

Holmes, R. W., Cementing Metal Screens to Cathode Ray Tubes—Sept, p 184

Horner, A. H. (see Durkin, A. E.)

Howat, David D., Ferritic Steels, New Creep Resistant—Sept, p 87

Hunt, J. R., Selecting Materials for Mechanical and Structural Applications—Sept, p 102

Klein, L. F., Copper and Silver Brazing Simplifies Joining of Complicated Assemblies—Dec, p 108

Larrimore, R. M. (see Linnert, G. E.)

Leary, John N., Vacuum Impregnation Makes Porosity-Free Castings—Sept, p 91

Lengbridge, John W., Which Metal Form—Spun or Drawn?—Aug, p 87

Linnert, G. E., Carbide Precipitation in Welding Stainless Steels, How to Control—Nov, p 98

Martin, Wayne, Bend Test for Aluminum-Magnesium Castings, New—Nov, p 186

Michaelson, Herbert B., High Temperature Materials for Vacuum Service—Dec, p 110

Miller, Mike A., Joining Aluminum to Other Metals—Sept, p 96

O'Keefe, Philip, Vinyl Metal Sheet, New—Sept, p 94

Riley, Malcolm W., Intricate Steel Shapes Now Cold Extruded—Sept, p 101

Rose, Kenneth
Compression Molded Phenolics for Large TV Cabinets—Oct, p 226
Synthetic Rubber Modifications, What's New In—Sept, p 108
Wood and Wood Base Materials (MATERIALS & METHODS Manual)—Sept, p 117

Rosenbaum, Harold H., Plastics Are Used in Air Liners, Where—Aug, p 100

Rouse, W. C., Ceramic Coating for Jet Engine Parts, Which?—Dec, p 116

Schaper, E. L., Magnesium as a Wear Resistant Metal—Oct, p 120

Slairetam, M. A., Photographic Inspection Spots Defective Brazing—Aug, p 94

Spagnola, Ralph
Heat Treating Gears to Meet Rigid Requirements—Aug, p 103
Nitriding Prevents Failure in Critical Steel Parts—Dec, p 96

Speer, J. R. (see Buker, C. B.)

Staats, Henry N., Conductivity—A Useful Nondestructive Testing Tool—Oct, p 124

Tour, Sam, Corrosion Tests for Materials and Finishes, Three Accelerated—Nov, p 110

Zapffe, Carl A., Russian Steels Today—Aug. p 79